Programming Manual

Allen-Bradley

Logix5000 Controllers Nonvolatile Memory Card

Catalog Numbers 1756 ControlLogix, 1768 CompactLogix, 1769 CompactLogix, PowerFlex with DriveLogix

Allen-Bradley • Rockwell Software

Rockwell Automation

Important User Information

Solid-state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (publication SGI-1.1 available from your local Rockwell Automation sales office or online at http://www.rockwellautomation.com/literature/) describes some important differences between solid-state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid-state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

	WARNING: Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.
	ATTENTION: Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence
	SHOCK HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.
	BURN HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.
IMPORTANT	Identifies information that is critical for successful application and understanding of the product.

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This manual contains new and updated information.

IMPORTANT RSLogix 5000 programming software is now known as Studio 5000™ Logix Designer application, a component of Studio 5000 Engineering and Design Environment.

The following controllers are no longer supported in the Logix Designer application, version 21.

Catalog Number	Description
1756-L61	ControlLogix 5561 Controller
1756-L61S	ControlLogix 5561S Controller
1756-L62	ControlLogix 5562 Controller
1756-L62S	ControlLogix 5562S Controller
1756-L63	ControlLogix 5563 Controller
1756-L63S	ControlLogix 5563S Controller
1756-L64	ControlLogix 5564 Controller
1756-L65	ControlLogix 5565 Controller
1768-L43	CompactLogix 5343 Controller
1768-L43S	CompactLogix 5343S Controller
1768-L45	CompactLogix 5345 Controller
1768-L45S	CompactLogix 5345S Controller
1769-L23E-QBF1	CompactLogix 5323E-QB1 Controller
1769-L23E-QBFC1	CompactLogix 5323E-QBFC1 Controller
1769-L23-QBFC1	CompactLogix 5323-QBFC1 Controller
1769-L31	CompactLogix 5331 Controller
1769-L32C	CompactLogix 5332C Controller
1769-L32E	CompactLogix 5332E Controller
1769-L35CR	CompactLogix 5335CR Controller
1769-L35E	CompactLogix 5335E Controller

Changes throughout this revision are marked by change bars, as shown in the margin of this page.

This table contains the changes made to this revision.

Topic	Page
Added support for the ControlLogix 5370 series of controllers.	page 10, page 27
Removed support for the 1784-CF64 CompactFlash card.	page 10, page 12
The knowledge base article “Working with the CompactFlash File System on Logix5000 Controllers” has a new article number.	page 27

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Studio 5000 Engineering and Design Environment and Logix Designer Application

The Studio 5000™ Engineering and Design Environment combines engineering and design elements into a common environment. The first element in the Studio 5000 environment is the Logix Designer application. The Logix Designer application is the rebranding of RSLogix™ 5000 software and will continue to be the product to program Logix5000™ controllers for discrete, process, batch, motion, safety, and drive-based solutions.

The Studio 5000 environment is the foundation for the future of Rockwell Automation® engineering design tools and capabilities. It is the one place for design engineers to develop all the elements of their control system.

In This Manual

This manual shows you how to access and use a memory card in Logix5000 controllers. This manual is one of a set of related manuals that show common procedures for programming and operating Logix5000 controllers.

For a complete list of common procedures manuals, see the *Logix 5000 Controllers Common Procedures Programming Manual*, publication 1756-PM001.

The term Logix5000 controller refers to any controller that is based on the Logix5000 operating system, such as:

- CompactLogix controllers.
- ControlLogix controllers.
- DriveLogix controllers.
- SoftLogix5800 controllers.

Additional Resources

These documents contain additional information concerning related Rockwell Automation products.

Resource	Description
Industrial Automation Wiring and Grounding Guidelines, publication, 1770-4.1.	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, http://www.ab.com	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at http://www.rockwellautomation.com/literature/. To order paper copies of technical documentation, contact your local Rockwell Automation distributor or sales representative.

Store and Load a Project By Using a Memory Card

Introduction

A memory card stores the contents of the user memory at the time that you store the project.

IMPORTANT Remember these guidelines with a memory card.

- Changes that you make after you store the project are not reflected in the contents of the memory card.
- If you make changes to the project but do not store those changes, you overwrite them when you load the project from a memory card. If this occurs, you have to upload or download the project to go online.
- If you want to store changes such as online edits, tag values, or a ControlNet network schedule, store the project again after you make the changes.

You can store or load a project by using the memory card of a controller.

- If the controller loses power and does not have enough energy capacity, it loses the project in user memory.
- A memory card lets you keep a copy of your project on the controller. The controller does not need power to keep this copy.
- You can load the copy from the memory card to the user memory of the controller:
  - on every powerup.
  - whenever there is no project in the controller and it powers-up.
  - anytime through the Logix Designer application.

A store or load from a memory card has these parameters.

Table 1 - Memory Card Parameters

Parameter	Store and Load
How much time does a store or load take?	Less than three minutes
In what controller mode can I store or load a project?	Program mode
Can I go online with the controller during a store or load?	No
What is the state of the I/O during a store or load?	I/O remains in its configured state for Program mode

Controllers with Memory Card Options

These Logix5000 controllers support a memory card for project storage.

Controller Type	Catalog Number	Firmware Revision	Supports a 1784-CF128 CompactFlash Card	Supports a 1784-SD1 or 1784-SD2 Secure Digital (SD) Card
1768 CompactLogix	1768-L43	15.*x* or later	Yes	No
	1768-L45	16.*x* or later		
1769 CompactLogix	1769-L31	13.x or later	Yes	No
	1769-L32E			
	1769-L32C			
	1769-L35CR			
	1769-L35E	12.*x* or later		
CompactLogix 5370	1769-L16ER-BB1B	20.x or later	No	Yes
	1769-L18ER-BB1B			
	1769-L18ERM-BB1B			
	1769-L24ER-QB1B	21.x or later		
	1769-L24ER-QBFC1B			
	1769-L26ER-BB1B			
	1769-L27ERM-QBFC1B			
	1769-L30ER	20.x or later		
	1769-L30ER-NSE			
	1769-L30ERM			
	1769-L33ER			
	1769-L36ERM			
ControlLogix	1756-L61	12.x or later	Yes	No
	1756-L62			
	1756-L63	11.*x* or later		
	1756-L64	16.*x* or later		
	1756-L65	17.*x* or later		
	1756-L73	18.*x* or later	No	Yes
	1756-L75			
	1756-L72	19.x or later	No	Yes
	1756-L74			
DriveLogix	5730	13.*x* or later	Yes	No

Prevent a Major Fault During a Load

If the major and minor revision of the project on the memory card does not match the major and minor revision of the controller, a major fault may occur during a load.

The memory card stores the firmware for projects ≥ 12.0. Depending on the current revision of the controller, you may be able to use the memory card to update the firmware of the controller and load the project.

Read/Write Card Data

Sample ladder logic code for the Logix Designer applicationis available for setting up and maintaining your file system on a Logix5000 controller to read and write data on a memory card. These are the three files you need:

- CF_Read_Write.ACD
- CF_Read_Write_Example.ACD
- Logix-AP007B-EN-P.pdf

To access these files, see http://samplecode.rockwellautomation.com.

CompactFlash Card Formatting

The Logix Designer1784-CF128 CompactFlash card does not have to be formatted to store controller information.

If the revision of your project is	Then
11.*x*	The CompactFlash card uses a special format. • Use only a Logix5000 controller to store a project on a CompactFlash card. • Store only a single project and no other data on a CompactFlash card. • When you store a project on a CompactFlash card, you overwrite the entire contents of the card. In other words, you lose everything that is currently on the card.
≥ 12.0	The CompactFlash card uses the FAT16 file system. **If the card** / **Then the controller** Is already formatted for the FAT16 file system → • Leaves existing data. • Creates folders and files for the project and firmware. The CompactFlash card using the FAT16 file system: • stores multiple projects and associated firmware. • if a card already contains a project with same name, a store overwrites the project on the CompactFlash card. • loads the most recently stored project. With a revision ≥ 12.0, you can also use a card reader to read and manipulate the files on a memory card. See Use a Memory Card Reader on page 25.

Secure Digital Card Formatting

A Secure Digital (SD) memory card (catalog numbers 1784-SD1 (1 GB), 1784-SD2 (2 GB)) that uses the FAT 16 file system does not have to be formatted when storing a project to a controller.

If the revision of your project is	Then
≥ 18.0	The SD card uses the FAT16 file system. **If the card** / **Then the controller** Is unlocked → • Leaves existing data. • Creates folders and files for the project and firmware. Is locked → • Does not allow writing to the card. The SD card using the FAT16 file system: • stores multiple projects and associated firmware. • if a card already contains a project with same name, a store overwrites the project on the card. • loads the most recently stored project. You also can use a card reader to read and manipulate the files on a memory card. See Use a Memory Card Reader on page 25.

One 1784-SD1 card ships with each 1756-L7*x* controller.

See page 17 for loading a SD card in the controller.

Perform Firmware Updates

This table outlines the options and precautions for updating the firmware of a controller that has a memory card.

If	Then
You meet all of these conditions: • The controller has a memory card. • The project on the memory card has a revision ≥ 12.0. • The project on the memory card has a Load Image option = On Power Up or On Corrupt Memory. • For a controller already in service, revision ≥ 12.0.	Update the firmware by using either: • memory card. • Logix Designer application. • ControlFlash software. (See Important) Follow this procedure to update the firmware and load the project by using the memory card. 1. Install the card in the controller. 2. If the Load Image option = On Corrupt Memory and the controller contains a project, before powering down, disconnect the battery or disengage the Energy Storage Module (ESM) from the controller. 3. Turn on or cycle power to the controller. Follow this procedure if you use the Logix Designer application or ControlFlash software to update the firmware. 1. During the update, the controller sets the Load Image option of the memory card to User Initiated. To prevent this, remove the card from the controller. 2. After you update the firmware, store the project again to the memory card. This ensures that the revision of the project on the memory card matches the revision of the controller.
You do not meet all of the conditions listed above	Update the firmware by using either: • Logix Designer application. • ControlFlash software. (See Important) Take these precautions: • Before you update the firmware either: – remove the memory card from the controller. – check the Load Image option of the memory card. If it is set to On Power Up or On Corrupt Memory, first store the project with the Load Image option set to User Initiated. Otherwise, you may get a major fault when you update the firmware of the controller. This occurs because the On Power Up or On Corrupt Memory options cause the controller to load the project from the memory card. The firmware mismatch after the load then causes a major fault. • After you update the firmware, store the project again to the memory card. This makes sure that the revision of the project on the memory card matches the revision of the controller.

IMPORTANT Make sure the SD card is unlocked if set to load On Power Up before using the ControlFlash software. Otherwise, the updated data may be overwritten by firmware on the SD card. An error message appears. Refer to the ControlLogix System User Manual, publication 1756-UM001, before updating.

Also, while it's not required for operation, leave the SD card installed in the controller. The SD card will save extended diagnostic information that can be sent to Rockwell Automation that provides enhanced diagnostics of the user's controller application and firmware should circumstances require this data.

When to Load an Image

You have several options for when (under what conditions) to load the project back into the user memory (RAM) of the controller.

If you want to load it	Then choose	Notes
Whenever you turn on or cycle the chassis power	On Power Up	• During a power cycle, you will lose any online changes, tag values, and network schedule that you have not stored on the memory card. • A load from a memory card may also change the firmware of the controller. For more information, see Perform Firmware Updates on page 13. • You can always use the Logix Designer application to load the project.
Whenever there is no project in the controller and you turn on or cycle the chassis power	On Corrupt Memory	• For example, if the battery becomes discharged or the ESM is disengaged and the controller loses power, the project is cleared from memory. When power is restored, this load option loads the project back into the controller. • A load from a memory card may also change the firmware of the controller. For more information, see Perform Firmware Updates on page 13. • You can always use theLogix Designer application to load the project.
Only through the Logix Designer application	User Initiated	

Here are some example uses for the different load options.

Table 2 - Load Option Examples

Example	Description
Load Image = On Power Up Load Mode = Program	1. You update the firmware of the controller to the desired revision. 2. You store the project for the controller on the memory card. 3. When you turn on power to the controller after installation, the project loads into the controller. 4. The controller remains in Program mode.
Load Image = On Corrupt Memory Load Mode = Run	1. You store the project for the controller on the memory card. (The major and minor revision of the firmware in the controller matches the major and minor revision of the project on the memory card.) 2. If the battery becomes completely discharged or the ESM is disengaged and power to the controller is interrupted, the project is cleared from controller memory. 3. When power is restored, the project automatically loads into the controller and the controller returns to Run mode.
Load Image = On Power Up Load Mode = Program Revision ≥ 12.0	1. The controller fails. 2. You remove the memory card. 3. You replace the failed controller with a new controller. 4. You replace the memory card. 5. When you turn on the power, both the firmware and project load into the controller. The controller remains in Program mode.
Load Image = User Initiated Load Mode = n/a	1. You want to load a different project into your controller. 2. A memory card contains the desired project. 3. With the memory card installed in the controller, you use the Logix Designer applicationto load the project into the controller.

Store a Project

This section explains how you store a project on the memory card of the controller.

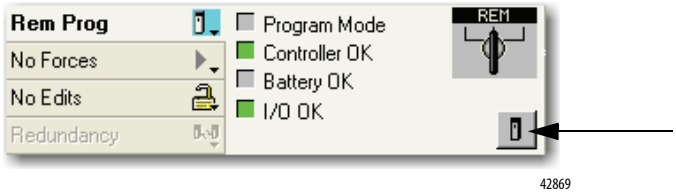
ATTENTION: During a store, all active servo axes are turned off. Before you store a project, make sure that this will not cause any unexpected movement of an axis.

Before you store the project:

- make all the required edits to the logic.
- download the project to the controller.
- schedule your ControlNet networks.

Follow these steps to store a project.

1. Go online with the controller.
2. Put the controller in Program mode (Rem Program or Program).
3. On the Online toolbar, click the controller properties icon.

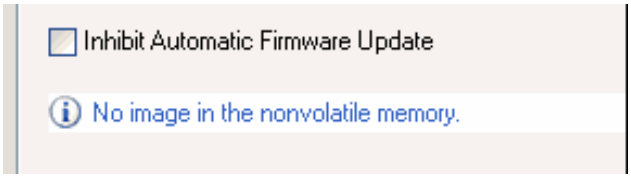


TIP For 1756-L7*x* controllers only, 'Energy Storage' instead of 'Battery OK' appears adjacent to the controller properties icon. Refer to the ControlLogix System User Manual, publication 1756-UM001, for information on the Energy Storage Module.

4. Click the Nonvolatile Memory tab and then click Load/Store.

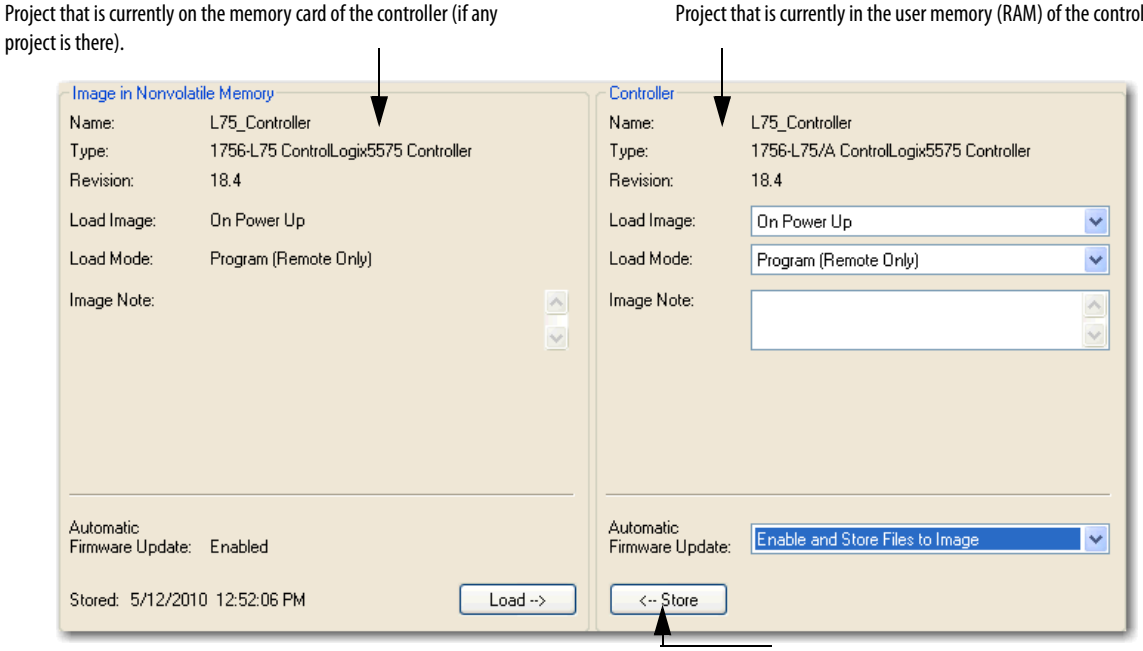
IMPORTANT At the bottom of the Nonvolatile Memory tab, a message appears if the CompactFlash card or SD card is empty.

A message also appears if the SD card is locked.



5. At the bottom of the Nonvolatile Memory tab, check the Inhibit Automatic Firmware Update box if you do not want to automatically store an image during a Save or Load.

6. Choose when (under what conditions) to load the project back into the user memory (RAM) of the controller.


Project that is currently on the memory card of the controller (if any project is there).
Project that is currently in the user memory (RAM) of the controller.
Image in Nonvolatile Memory
Name: L75_Controller
Type: 1756-L75 ControlLogix5575 Controller
Revision: 18.4
Load Image: On Power Up
Load Mode: Program (Remote Only)
Image Note:
Automatic Firmware Update: Enabled
Stored: 5/12/2010 12:52:06 PM
Load -->
Controller
Name: L75_Controller
Type: 1756-L75/A ControlLogix5575 Controller
Revision: 18.4
Load Image: On Power Up
Load Mode: Program (Remote Only)
Image Note:
Automatic Firmware Update: Enable and Store Files to Image
<-- Store

If you choose On Power Up or On Corrupt Memory, you must also choose the mode you want to controller to go to after the load:

- Remote Program
- Remote Run

7. In the Automatic Firmware Update box, use the default (disable) or choose the appropriate firmware supervisor.

   For details on the firmware supervisor options, see the ControlLogix System User Manual, publication 1756-UM001.

8. Click <- Store.

IMPORTANT Store is not active if a SD card is locked.

A dialog box asks you to confirm the store.

9. To store the project, click Yes.

The table describes the events that occur depending on which memory card is being used.

If using	This happens during the store
CompactFlash Card	• On the front of the controller, the OK status indicator displays the following sequence: flashing green> solid red> solid green. • Logix Designer application goes offline. • A dialog box tells you that the store is in progress.

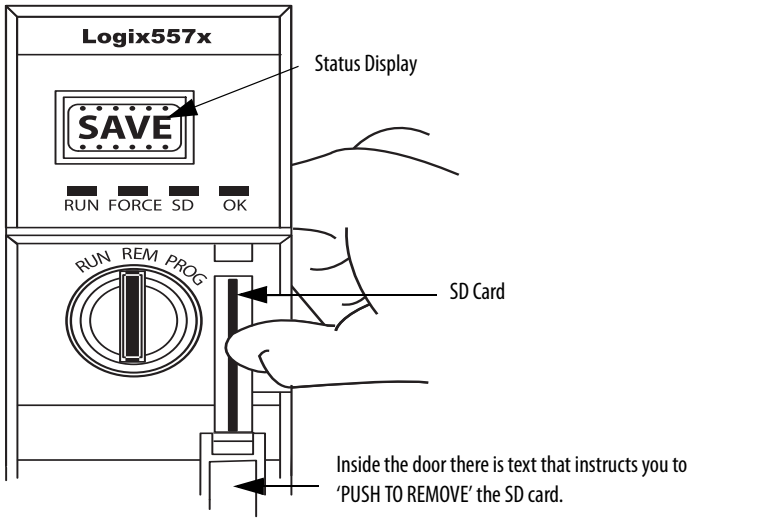
If using	This happens during the store
SD Card	• On the front of the controller, the SD and OK status indicators are flashing green. • The Status Display reads 'SAVE'. See the illustration. • A dialog box tells you that the store is in progress.

10. Click OK.

When the store is finished, you remain offline.

The illustration shows an example of the word 'SAVE' on the controller's Status Display and the location of the SD card.

ControlLogix 1756-L7x Controller with SD Card



For procedures on loading and removing the SD card in the card slot, refer to the ControlLogix System User Manual, publication 1756-UM001.

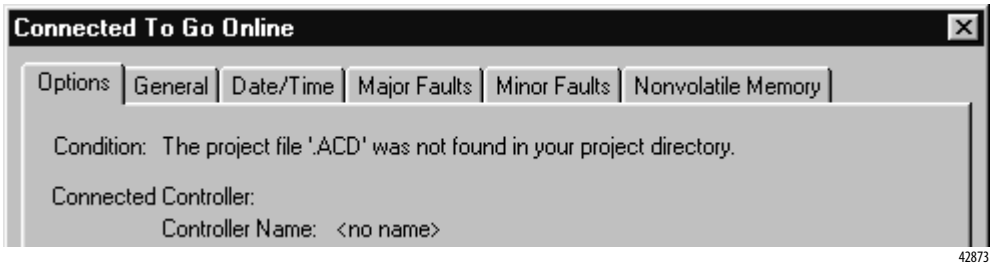
Load a Project

Follow these steps to use the Logix Designer application to load the project from a memory card.

ATTENTION: During a load, all active servo axes are turned off. Before you load a project, make sure that this will not cause any unexpected movement of an axis.

IMPORTANT Make sure the SD card is unlocked if set to load On Power Up before using the ControlFlash software. Otherwise, the updated data may be overwritten by firmware on the SD card. An error message appears. Refer to the ControlLogix System User Manual, publication 1756-UM001, before updating.

1. Go online with the controller.
2. Did this dialog box open?



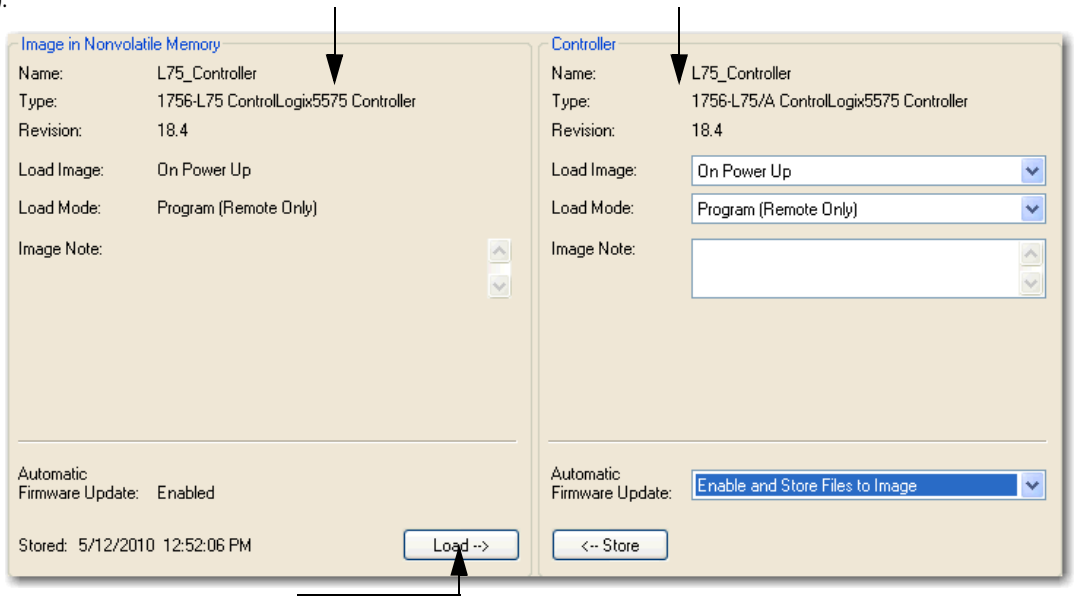
If	Then
No	a. Put the controller in Program mode (Rem Program or Program). b. On the Online toolbar, click the controller properties icon.
Yes	Put the controller in Program mode (Rem Program or Program). Use either the: • General tab of the Connected To Go Online dialog box. • keyswitch on the front of the controller.

3. Click the Nonvolatile Memory tab and then click Load/Store.

4. Click Load ->.

Project that is currently on the memory card of the controller (if any project is there).

Project that is currently in the user memory (RAM) of the controller.



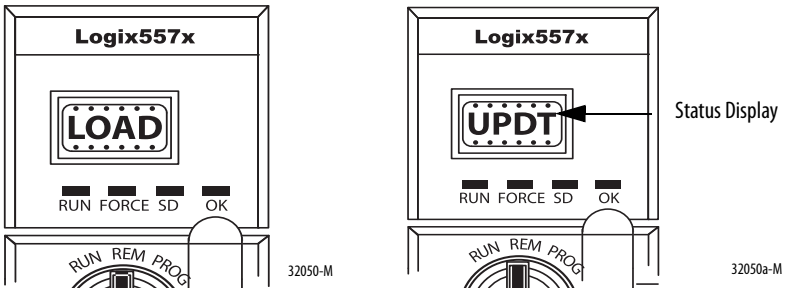
A dialog box asks you to confirm the load.

5. To load the project from the memory card, click Yes.

The table describes the events that occur depending on which memory card is being used.

If using	And the load	Then the OK status indicators display
CompactFlash Card	Does not include firmware	Solid red> solid green
	Includes firmware	Flashing red> solid red> solid green
SD Card	Does not include firmware	OK status indicator is solid green; SD status indicator flashes green. Status Display reads 'LOAD'. See the illustration.
	Includes firmware	OK status indicator flashes red; SD status indicator flashes green. Status Display reads 'UPDT' . See the illustration.

Load and Update Examples on the Status Display



Logix Designer application goes offline.

When the load is finished, you remain offline.

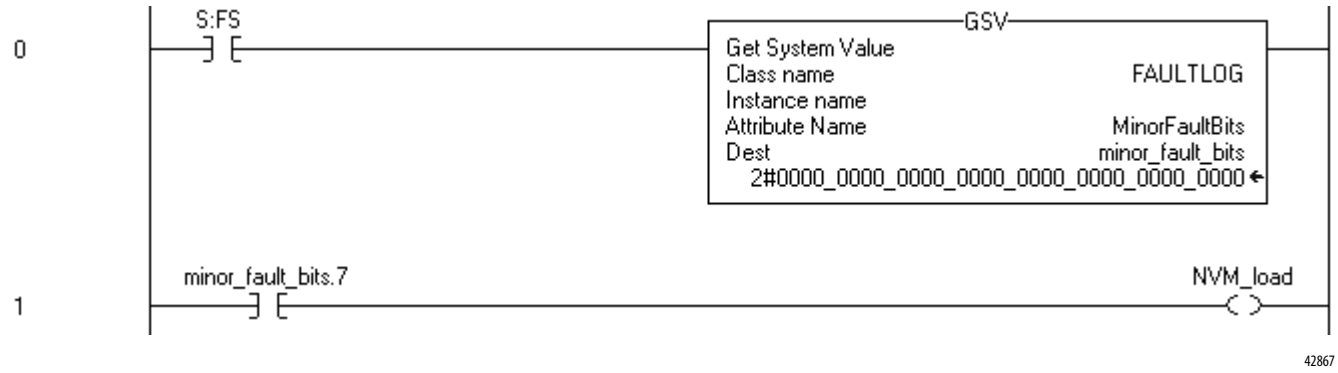
Check for a Load

When the controller loads a project from a memory card, it:

- logs a minor fault (type 7, code 49).
- sets the FAULTLOG object, MinorFaultBits attribute, bit 7.

If you want your project to flag that it loaded from a memory card, use this logic.

On the first scan of the project (S:FS is on), the GSV instruction gets the FAULTLOG object, MinorFaultBits attribute, and stores the value in minor_fault_bits. If bit 7 is on, the controller loaded the project from its memory card.

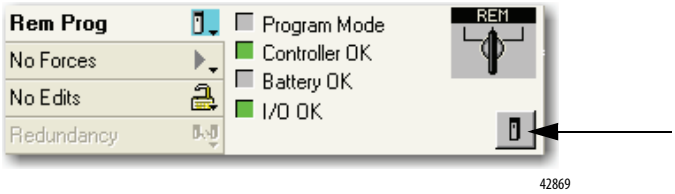


Where	Is
Minor_fault_bits	Tag that stores the FAULTLOG object, MinorFaultBits attribute. Data type is DINT.
NVM_load	Tag that indicates that the controller loaded the project from its memory card.

Clear a Memory Card

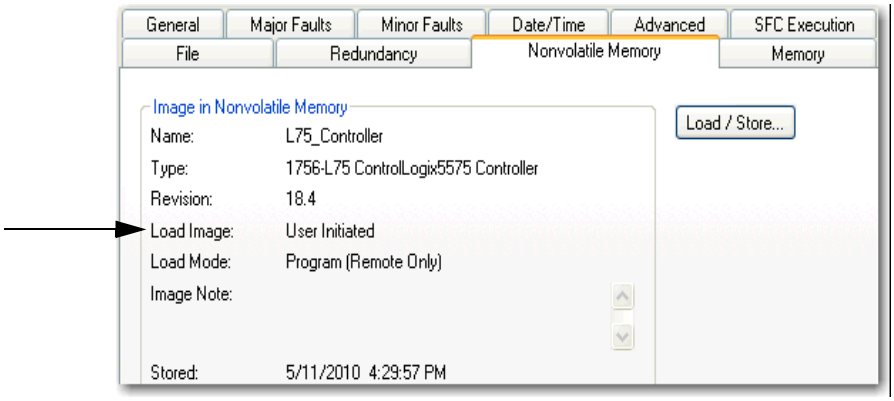
Follow these steps to remove a project from a memory card.

1. Go online with the controller.
2. On the Online toolbar, click the controller properties icon.



TIP For 1756-L7*x* controllers only, 'Energy Storage' instead of 'Battery OK' appears adjacent to the controller properties icon. Refer to the ControlLogix System User Manual, publication 1756-UM001, for information on the Energy Storage Module.

3. Click the Nonvolatile Memory tab.



4. Is the Load Image option set to User Initiated?

If	Then
No	Go to Change the Load Image Option on page 22.
Yes	Go to Clear the Project from the Controller on page 23.

Change the Load Image Option

1. Click Load/Store.
2. From the Load Image drop-down menu, choose User Initiated.
3. Click <- Store.

IMPORTANT Store is not active if a SD card is locked.

A dialog box asks you to confirm the store.

4. To store the project, click Yes.

   A dialog box tells you that the store is in progress.
5. Click OK.
6. Wait until the OK status indicator on the front of the controller is steady green.

   This indicates that the store is finished.

Clear the Project from the Controller

If your application allows you to clear a project, do these steps.

1. With power still applied to the controller, disconnect the battery or other energy storage module from the controller.
2. Cycle the power to the chassis.
3. Re-connect the battery or other energy storage module to the controller.

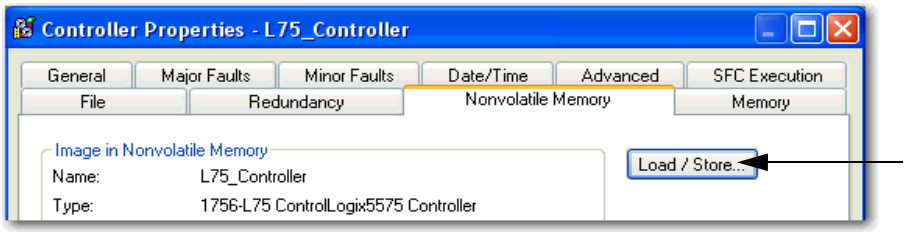
   For more information, see these publications:

- ControlLogix Energy Storage Modules Installation Instructions, publication 1756-IN616.
- ControlLogix System User Manual, publication 1756-UM001.

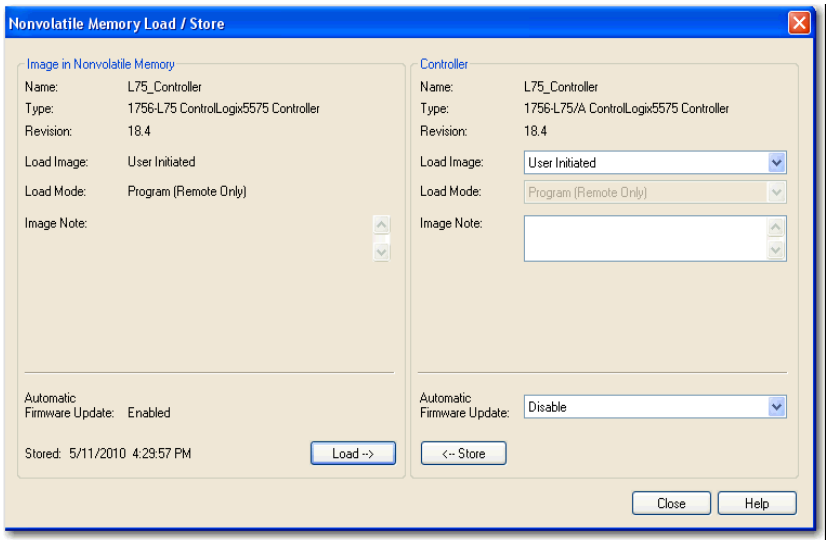
Store the Empty Image

1. Go online with the controller.

   The Connected To Go Online dialog box opens.
2. Click the Nonvolatile Memory tab.



3. Click Load/Store.



4. Click <-Store.

IMPORTANT Store is not active if a SD card is locked.

A dialog box asks you to confirm the store.

5. To store the project, click Yes.

The table describes the events that occur depending on which memory card is being used.

If using	This happens during the store
CompactFlashCard	• On the front of the controller, the OK status indicator displays the following sequence: flashing green> solid red> solid green. • Logix Designer application goes offline. • A dialog box tells you that the store is in progress.
SD Card	• On the front of the controller, the SD and OK status indicators are flashing green. • The Status Display reads 'SAVE'. See Figure on page 17. • Logix Designer application goes offline. • A dialog box tells you that the store is in progress.

6. Click OK.

When the store is finished, you remain offline.

Use a Memory Card Reader

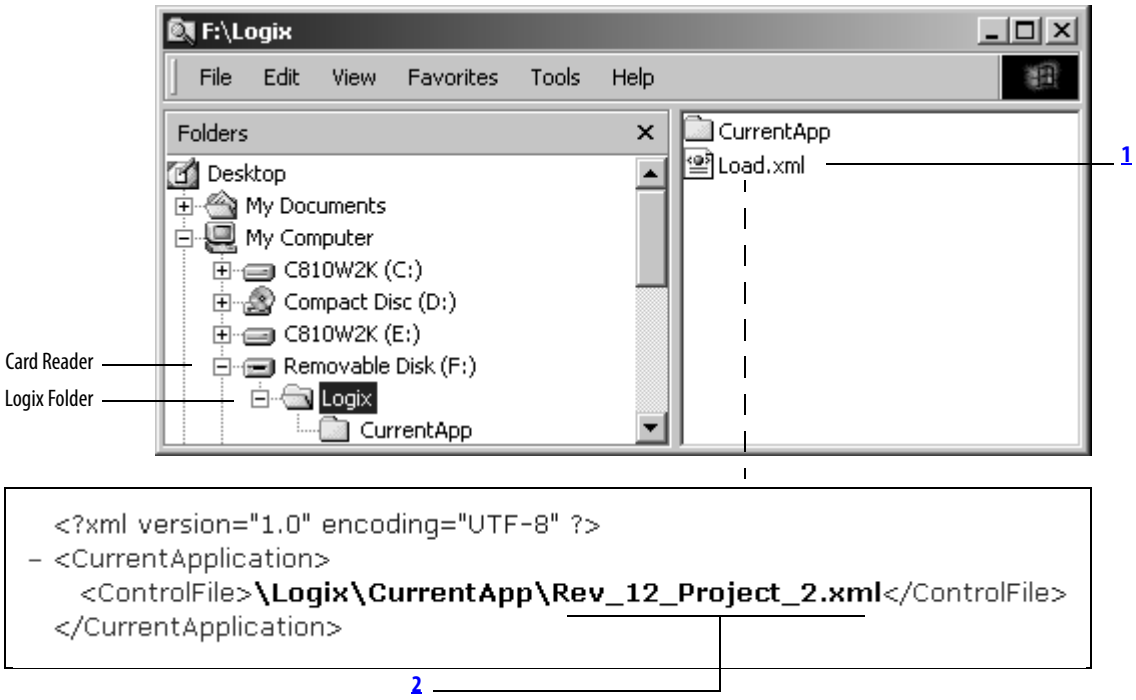
Introduction

A sample controller project that reads and writes a memory card is available with the Logix Designer application. In the application, from the Help menu choose Vendor Sample Projects to display a list of available sample projects.

Change Which Project Loads

A memory card can store multiple projects. By default, the controller loads the project that you most recently stored, according to the load options of that project.

To assign a different project to load from the memory card, edit the Load.xml file on the card by following the steps that match the numbers in the illustration.



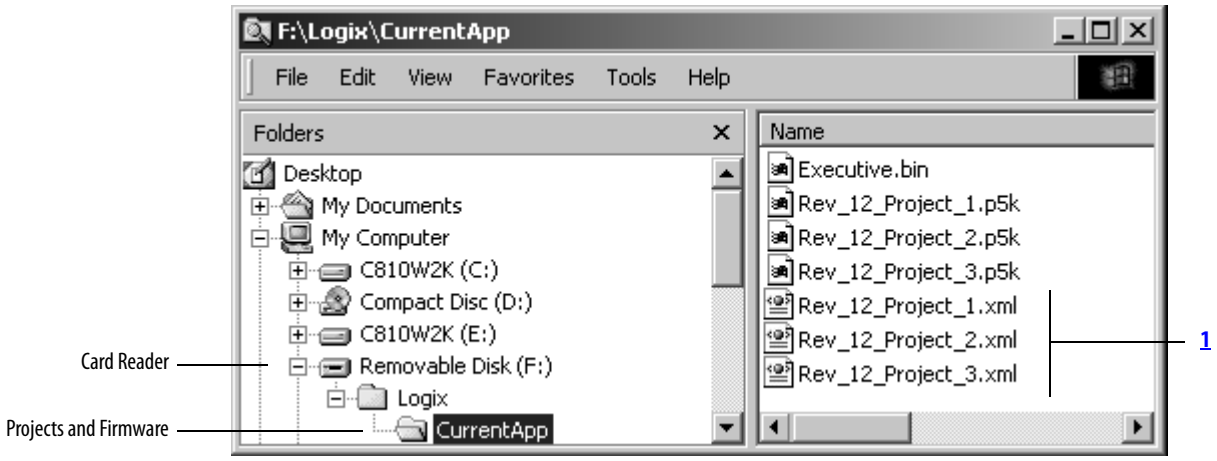
1. To change which project loads from the card, use a text editor to open the Load.xml file.
2. Edit the name of the project that you want to load.
   - Use the name of an XML file that is in the CurrentApp folder.
   - In the CurrentApp folder, a project is comprised of an XML file and a P5K file.

Change the Load Parameters

When you store a project to a memory card, you define:

- when the project is to load (On Power Up, On Corrupt Memory, User Initiated).
- the mode to set the controller (if the keyswitch is in REM and the Load mode is not User Initiated).

To assign a different project to load from the memory card, edit the Load.xml file on the card by following the steps that match the numbers in the illustration.



1. To change the load parameters for a project, use a text editor to open the XML file with the same name as the project.

```
<?xml version="1.0" encoding="UTF-8" ?>
- <Controller>
  - <ExecutiveLoadOption>
      <ExecFile>\Logix\CurrentApp\Executive.bin</ExecFile>
    </ExecutiveLoadOption>
  - <ProgramLoadOption>
2     <ProgramLoadMode>CORRUPT_RAM</ProgramLoadMode>
      <LoadFile>\Logix\CurrentApp\Rev_12_Project_2.p5k</LoadFile>
    </ProgramLoadOption>
  - <ControllerModeOption>
3     <ControllerMode>RUN</ControllerMode>
    </ControllerModeOption>
  </Controller>
```

2. Edit the Load Image option of the project.

To set the Load Image option to	Then enter
On Power Up	ALWAYS
On Corrupt Memory	CORRUPT_RAM
User Initiated	USER_INITIATED

3. Edit the Load Mode option of the project (does not apply if the Load Image option is User Initiated).

To set the Load Mode option to	Then enter
Program (Remote Only)	PROGRAM
Run (Remote Only)	RUN

Other Uses for a Memory Card

For these controllers, you can use the memory card to store data, in addition to controller projects:

- 1756 ControlLogix controllers, revision 13 and later
- 1756-L7x ControlLogix controllers, firmware revision 18 and later
- 1769-L32E CompactLogix controllers, serial number SS0QZ000 and later
- 1769-L35E CompactLogix controllers, serial number SS0OR9GE and later
- CompactLogix 5370 controllers, revision 20 and later

These are some examples:

- A PanelView terminal changes tag values in a controller project. If power to the controller is lost (and the controller is not battery backed up), the program running in the controller, along with any values that were changed by the PanelView terminal will be lost. Use the memory card and logic in the project to store tag values as they change. When the project reloads from the memory card, it can check the memory card for any saved tag values and reload those into the project.

- Store a collection of recipes on the memory card. When you need to change a recipe, program the controller to read data for the new recipe from a memory card.

- Program the controller to write data logs at specific time intervals.

You can also read and write memory cards by using a memory card reader. This method writes tag values in binary. You can read the data with any text editor, but the data displays as the ASCII equivalent of the binary data.

For more information, see the sample projects available with the Logix Designer application. In the application, from the Help menu choose Vendor Sample Projects to display a list of available sample projects.

You can also see the 28539 Technical Note “Working with the CompactFlash File System on Logix5000 Controllers” from the MySupport Knowledgebase. Access this database by clicking the Knowledgebase link from http://www.rockwellautomation.com.

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Installation Assistance

If you experience a problem within the first 24 hours of installation, review the information that is contained in this manual. You can contact Customer Support for initial help in getting your product up and running.

United States or Canada	1.440.646.3434
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